

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1- 29 (Cancelled)

30. (Currently Amended) A transmitter for remotely controlling a locomotive in which is mounted a slave controller, said transmitter comprising:

- an interface for receiving an identifier of the slave controller via a first communication link, the first communication link being a wireless communication link;
- a data storage in communication with said interface for storing the identifier of the slave controller received via the first communication link, said data storage being operative to store an identifier of said transmitter;
- a message builder in communication with said data storage, said message builder being operative to construct a message having a tag portion and a command portion, the tag portion conveying data derived from the identifier of the slave controller and data derived from the identifier of said transmitter;
- a message encoder in communication with said message builder to encode the message constructed by said message builder;
- a signal transmitting unit in communication with said message encoder for transmitting a signal containing the encoded message over a second communication link, the second communication link being an a wireless RF communication link,

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

the signal being indicative of at least one command for causing an action to be performed by the locomotive.

31. (Previously Presented) A transmitter as defined in claim 30, wherein said message encoder processes the message constructed by said message builder to reduce an occurrence of consecutive 0's or 1's in the message constructed by said message builder.

32. (Previously Presented) A transmitter as defined in claim 30, wherein said signal transmitting unit is in communication with said message encoder for receiving the message encoded by said message encoder and for producing the signal conveying the at least one command on the basis of the message encoded by said message encoder.

33. (Previously Presented) A transmitter as defined in claim 32, wherein said signal transmitting unit includes a modulator for modulating the message encoded by said message encoder to produce the signal conveying the at least one command.

34-42 (Cancelled)

43. (Currently Amended) A transmitter for remotely controlling a locomotive, said transmitter comprising:

- a data storage for holding an identifier of said transmitter and for storing an identifier of a slave controller located on board the locomotive;
- an interface in communication with said data storage, said interface being operative to establish a first communication link with an external entity for transmitting to the external entity data derived from the identifier of said transmitter via the first communication link;
- a message builder in communication with said data storage, said message builder being operative to construct a message having a tag portion and a command

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

portion, the tag portion conveying data derived from the identifier of the slave controller and data derived from the identifier of said transmitter;

- a message encoder in communication with said message builder to encode the message constructed by said message builder;
- a signal transmitting unit in communication with said message encoder data-storage, said signal transmitting unit being operative to transmit a signal containing the encoded message to the slave controller over a second communication link, the second communication link being an a wireless RF communication link, the signal conveying:
 - a) at least one command for causing an action to be performed by the locomotive; and
 - b) data derived from the identifier of said transmitter.

44. (Previously Presented) A transmitter as defined in claim 43, wherein said signal transmitting unit is in communication with said message encoder for receiving the message encoded by said message encoder and for producing the signal conveying the at least one command on the basis of the message encoded by said message encoder.

45. (Previously Presented) A transmitter as defined in claim 44, wherein said message encoder processes the message constructed by said message builder to reduce an occurrence of consecutive 0's or 1's in the message constructed by said message builder.

46. (Previously Presented) A transmitter as defined in claim 44, wherein said signal transmitting unit includes a modulator for modulating the message encoded by said message encoder to produce the signal conveying the at least one command.

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

47. (Currently Amended) A transmitter as defined in claim 44 ~~claim 41~~, wherein said interface is operative to receive over the first communication link the identifier of the slave controller for storage in said data storage.

48-52 (Cancelled)

53. (Currently Amended) A slave controller for use in a locomotive having a controller module, said slave controller comprising:

- a) an interface for receiving an identifier of a transmitter via a first communication link, the first communication link being a wireless communication link;
- b) a data storage in communication with said interface, said data storage being suitable for storing the identifier of the transmitter and an identifier of said slave controller;
- c) a signal receiver unit for receiving a signal from the transmitter over a second communication link, the second communication link being ~~an~~ a wireless RF communication link, the signal conveying a message including a command portion indicative of at least one command for causing an action to be performed by the locomotive, the message also including a tag portion including data derived from the identifier of the transmitter and data derived from the identifier of said slave controller;
- d) a logical processing unit in communication with said data storage and with said signal receiver unit, said logical processing unit being operative to:
 - i) perform a validation procedure on the message including comparing the tag portion in the message with the identifier of the transmitter and the identifier of said slave controller in said data storage;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

ii) if the validation procedure validates the message, generate control signals directed to the controller module for causing the locomotive to perform the at least one action.

54. (Previously Presented) A slave controller as defined in claim 53, wherein said data storage is operative to release the identifier of said slave controller to said interface for transmission over the first communication link.

55. (Previously Presented) A slave controller as defined in claim 54, wherein the validation procedure includes an assessment of an integrity of the signal conveying a message.

56. (Previously Presented) A slave controller as defined in claim 55, wherein the assessment of the integrity of the signal conveying a message includes processing the signal conveying the message by an error detection algorithm.

57. (Previously presented) A slave controller as defined in claim 55, wherein the assessment of the integrity of the signal conveying a message includes processing the signal conveying a message by an error correction algorithm.

58. (Cancelled)

59. (Previously Presented) A slave controller as defined in claim 53, wherein the action to be performed by the locomotive is acceleration.

60. (Previously Presented) A slave controller as defined in claim 53, wherein the action to be performed by the locomotive is braking.

61. (Currently amended) In combination:

- a) a locomotive having a controller module;
- b) a slave controller mounted on board the locomotive;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

- c) said slave controller comprising:
- i) an interface for receiving an identifier of a transmitter via a first communication link, the first communication link being a wireless communication link;
 - ii) a data storage in communication with said interface, said data storage being suitable for storing the identifier of the transmitter and an identifier of said slave controller
 - iii) a signal receiver unit for receiving a signal from the transmitter over a second communication link, the second communication link being ~~an~~ a wireless RF communication link, the signal conveying a message including a command portion and a tag portion, the command portion being indicative of at least one command for causing an action to be performed by said locomotive, the tag portion including data derived from the identifier of the transmitter and data derived from the identifier of said slave controller;
 - iv) a logical processing unit in communication with said data storage and with said signal receiver unit, said logical processing unit being operative to:
 - (1) perform a validation procedure on the message including comparing data in the tag portion in the message with the identifier of the transmitter and the identifier of said slave controller in said data storage;
 - (2) if the validation procedure validates the message, generate control signals and directing the control signals to the controller module for causing said locomotive to perform the at least one action.

U.S. Patent Application Serial No. 09/231,464
Reply to Office Action dated September 30, 2005

62. (Previously Presented) A combination as defined in claim 61, wherein said data storage is operative to release the identifier of said slave controller to said interface for transmission over the first communication link.

63. (Previously Presented) A combination as defined in claim 61, wherein the validation procedure includes an assessment of an integrity of the signal conveying a message.

64. (Previously Presented) A combination as defined in claim 63, wherein the assessment of the integrity of the signal conveying a message includes processing the signal conveying a message by an error detection algorithm.

65. (Previously Presented) A combination as defined in claim 63, wherein the assessment of the integrity of the signal conveying a message includes processing the signal conveying a message by an error correction algorithm.

66. (Cancelled)

67. (Previously Presented) A combination as defined in claim 61, wherein the action to be performed by the locomotive is acceleration.

68. (Previously Presented) A combination as defined in claim 61, wherein the action to be performed by the locomotive is braking.

69. (Currently Amended) A remote control system for a locomotive having a controller module, said remote control system comprising:

- a) a slave controller for mounting on-board the locomotive;
- b) a transmitter for transmitting a wireless signal over a first communication link, said transmitter having an identifier, the first communication link being ~~an~~ a wireless RF

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

communication link, the wireless signal ~~being indicative of~~ conveying at least one command for causing an action to be performed by the locomotive;

c) said slave controller being responsive to the wireless signal to generate control signals for transmission to the controller module to implement the at least one command;

d) said slave controller being operative to output over a second communication link an identifier of said slave controller for transmission to said transmitter, the second communication link being a wireless communication link;

e) the wireless signal including data derived from the identifier of said slave controller and data derived from the identifier of said transmitter, the identifier of said slave controller being different from the identifier of said transmitter.

70. (Previously Presented) A remote control system as defined in claim 69, wherein said transmitter includes a data storage for storing the identifier of said slave controller.

71. (Previously Presented) A remote control system as defined in claim 70, wherein said data storage is adapted to store an identifier of said transmitter.

72. (Previously Presented) A remote control system as defined in claim 71, wherein said transmitter includes a signal transmitting unit for transmitting the wireless signal over the first communication link.

73. (Previously Presented) A remote control system as defined in claim 72, wherein said transmitter includes a message builder in communication with said data storage, said message builder being operative to construct a message having a tag portion and a command portion, the tag portion conveying data derived from the identifier of said slave controller and data derived from the identifier of said transmitter, the command portion conveying the at least one command.

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

74. (Previously Presented) A remote control system as defined in claim 73, wherein said transmitter has an interface in communication with said data storage for outputting the identifier of said transmitter over the second communication link.

75. (Previously Presented) A remote control system as defined in claim 74, wherein said interface is operative to receive the identifier of said slave controller and to transmit the identifier of said slave controller to said data storage.

76. (Previously Presented) A remote control system as defined in claim 75, wherein said interface is an IR interface.

77. (Previously Presented) A remote control system as defined in claim 76, wherein the action to be performed by the locomotive is acceleration.

78. (Previously Presented) A remote control system as defined in claim 76, wherein the action to be performed by the locomotive is braking.

79. (Previously Presented) A remote control system as defined in claim 69, wherein said slave controller includes:

- a) a data storage for holding the identifier of said slave controller;
- b) an interface in communication with said data storage, said interface operative to output over the second communication link via said interface the identifier of said slave controller.

80. (Previously Presented) A remote control system as defined in claim 79, wherein said interface is operative to receive over the second communication link an identifier of said transmitter and to direct the identifier of said transmitter to said data storage for storage therein.

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

81. (Previously Presented) A remote control system as defined in claim 80, wherein the wireless signal transmitted by said transmitter over the first communication link conveys a message including:

- a) a command portion indicative of the at least one command;
- b) a tag portion including data derived from the identifier of said transmitter and data derived from the identifier of said slave controller.

82. (Previously Presented) A remote control system as defined in claim 81, wherein said slave controller includes a signal receiver unit for receiving the wireless signal transmitted by said transmitter over the first communication link.

83. (Previously Presented) A remote control system as defined in claim 82, wherein said slave controller includes a logical processing unit in communication with said data storage and with said signal receiver unit, said logical processing unit being operative to:

- a) perform a validation procedure on the message including comparing data in the tag portion of the message with the identifier of said transmitter and the identifier of said slave controller in said data storage;
- b) if the validation procedure validates the message, generate control signals for transmission to the controller module for causing the locomotive to perform the action.

84. (Cancelled)

85. (Currently Amended) A remote control system for a locomotive having a controller module, said remote control system comprising:

- a) a slave controller for mounting on-board the locomotive;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

- b) a transmitter for transmitting a wireless signal over a first communication link, the first communication link being an a wireless RF communication link, the wireless signal being indicative of at least one command for causing an action to be performed by the locomotive;
 - c) said slave controller being responsive to the wireless signal to generate control signals for transmission to the controller module to implement the at least one command;
 - d) said slave controller being operative to receive over a second communication link an identifier of said transmitter, the second communication link being a wireless communication link;
 - e) said slave controller being operative to output over the second communication link an identifier of said slave controller for transmission to said transmitter;
 - f) the wireless signal including data derived from the identifier of said transmitter.
86. (Previously Presented) A remote control system as defined in claim 85, wherein said transmitter includes a data storage for storing the identifier of said slave controller.
87. (Previously Presented) A remote control system as defined in claim 86, wherein said data storage is operative to store the identifier of said transmitter.
88. (Previously Presented) A remote control system as defined in claim 87, wherein said transmitter includes a signal transmitting unit for transmitting the wireless signal over the first communication link.
89. (Previously Presented) A remote control system as defined in claim 88, wherein said transmitter includes a message builder in communication with said data storage, said message builder operative to construct a message having a tag portion and a command portion, the tag

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

portion conveying data derived from the identifier of said slave controller and data derived from the identifier of said transmitter, the command portion conveying the command.

90. (Previously Presented) A remote control system as defined in claim 89, wherein said transmitter has an interface in communication with said data storage for outputting the identifier of said transmitter over the second communication link.

91. (Previously Presented) A remote control system as defined in claim 90, wherein said interface is operative to receive the identifier of said slave controller and to transmit the identifier of said slave controller to said data storage for storage therein.

92. (Previously Presented) A remote control system as defined in claim 91, wherein said interface is an IR interface.

93. (Previously Presented) A remote control system as defined in claim 89, wherein the action to be performed by the locomotive is acceleration.

94. (Previously Presented) A remote control system as defined in claim 89, wherein the action to be performed by the locomotive is braking.

95. (Previously Presented) A remote control system as defined in claim 85, wherein said slave controller includes:

- a) a data storage for holding the identifier of said slave controller;
- b) an interface in communication with said data storage, said interface operative to output over the second communication link via said interface the identifier of said slave controller.

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

96. (Previously Presented) A remote control system as defined in claim 95, wherein said interface is operative to receive over the second communication link the identifier of said transmitter and to direct the identifier of said transmitter to said data storage for storage therein.

97. (Previously Presented) A remote control system as defined in claim 96, wherein the wireless signal transmitted by said transmitter over the first communication link conveys a message including:

- a) a command portion indicative of the at least one command;
- b) a tag portion including data derived from the identifier of said transmitter and data derived from the identifier of said slave controller.

98. (Previously Presented) A remote control system as defined in claim 97, wherein said slave controller includes a signal receiver unit for receiving the wireless signal transmitted by said transmitter over the first communication link.

99. (Previously Presented) A remote control system as defined in claim 98, wherein said slave controller includes a logical processing unit in communication with said data storage and with said signal receiver unit, said logical processing unit being operative to:

- a) perform a validation procedure on the message including comparing data in the tag portion in the message with the identifier of said transmitter and the identifier of said slave controller in the data storage;
- b) if the validation procedure validates the message generating control signals for transmission to the controller module for causing the locomotive to perform the at least one action.

100-103 (Cancelled)

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

104. (Currently Amended) A method for remotely controlling a locomotive in which is mounted a slave controller, said method comprising:

- a) providing a portable transmitter;
- b) communicating to the portable transmitter an identifier of the slave controller over a first communication link, the first communication link being a wireless communication link;
- c) storing in a data storage in said portable transmitter the identifier of the slave controller communicated over the first communication link;
- d) outputting from the portable transmitter over the first communication link an identifier of the portable transmitter for transmission to the slave controller;
- e) transmitting to the slave controller a wireless signal over a second communication link, the second communication link being ~~an~~ a wireless RF communication link, the wireless signal conveys a message including:
 - i) a command portion indicative of at least one command for causing an action to be performed by the locomotive;
 - ii) a tag portion including data derived from the identifier of the portable transmitter and data derived from the identifier of the slave controller.

105. (Previously Presented) A method as defined in claim 104, wherein the first communication link is an IR link.

106. (Currently Amended) A method for remotely controlling a locomotive in which is provided a controller module, comprising:

- a) mounting on board the locomotive a slave controller;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

- b) interfacing the slave controller with the controller module;
- c) communicating to the slave controller over a first communication link an identifier of a remote portable transmitter, the first communication link being a wireless communication link;
- d) storing in a data storage in the slave controller the identifier of the remote portable transmitter;
- e) transmitting from the remote portable transmitter a wireless signal over a second communication link ~~different~~ distinct from the first communication link, the second communication link being ~~an~~ a wireless RF communication link, the wireless signal conveying a message including:
 - i) a command portion indicative of at least one command for causing an action to be performed by the locomotive; and
 - ii) a tag portion;
- f) receiving the wireless signal at the slave controller;
- g) performing a validation procedure at the slave controller by comparing data in the tag portion of the message in the received wireless signal with the identifier of the remote portable transmitter in the data storage and an identifier of the slave controller;
- h) if the validation procedure validates the message in the received wireless signal, generating control signals and directing the control signals to the controller module for causing the locomotive to perform the action.

107. (Currently Amended) A device for synchronizing addresses in a communication control system, the communication control system including a slave controller ~~first component~~ having a

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

memory storing a first identifier and a transmitter unit for remotely controlling a locomotive in which is mounted the slave controller. the transmitter unit ~~second component~~ having a memory storing a second identifier, said device comprising:

- a) a port for establishing a communication link with the slave controller ~~first component~~ and for establishing a communication link with the transmitter unit ~~second component~~, the communication link with one of the slave controller and the transmitter unit ~~first and second components~~ being a wireless communication link;
- b) a memory unit;
- c) a processing unit operatively coupled to said port and said memory unit, said processing unit being suitable for:
 - i) establishing a communication link through said port with the slave controller ~~first component~~ for acquiring the first identifier from the slave controller ~~first component~~ ;
 - ii) storing the first identifier in said memory unit;
 - ii) establishing a communication link through said port with the transmitter unit ~~second component~~ for transmitting the first identifier stored in said memory unit to the transmitter unit ~~second component~~.

108-109 (Cancelled)

110. (Currently Amended) A device as defined in claim 107, wherein said port has a first interface for communication with the slave controller ~~first component~~ and a second interface for communication with the transmitter unit ~~second component~~.

111. (Cancelled)

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

112. (Previously Presented) A device as defined in claim 110, wherein at least one of said first interface and said second interface is an infrared interface.

113. (Previously Presented) A device as defined in claim 110, wherein at least one of said first interface and said second interface is a serial connection interface.

114. (Currently Amended) A device as defined in claim 107, wherein said processing unit is further suitable for:

- a) establishing a communication link with the transmitter unit ~~second component~~ for acquiring the second identifier from the transmitter unit ~~second component~~;
- b) storing the second identifier in said memory unit;
- c) establishing a communication link with the slave controller ~~first component~~ for transmitting the second identifier stored in said memory unit to the slave controller ~~first component~~.

115. (Currently Amended) A method for synchronizing addresses in a communication control system, the communication control system having a first component associated to a first identifier, a second component associated to a second identifier and an operator programming unit, said method comprising:

- i) establishing a communication link between the operator programming unit and the first component for transmitting the first identifier from the first component to the operator programming unit;
- ii) establishing a communication link between the operator programming unit and the second component for transmitting the first identifier from the operator programming unit to the second component, wherein the communication link

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

between the operator programming unit and one of the first component and the second component is a wireless communication link;

iii) generating an address at the second component on the basis of the first identifier and the second identifier, wherein the first identifier and the second identifier are different.

116. (Previously Presented) A method as defined in claim 115, wherein the first component is a slave controller module and the second component is a transmitter unit.

117. (Previously Presented) A method as defined in claim 115, wherein the first component is a transmitter unit and the second component is a slave controller module.

118. (Cancelled)

119. (Previously Presented) A method as defined in claim 115, wherein said wireless communication link is an infrared communication link.

120. (Previously Presented) A method as defined in claim 115, wherein the communication link between the operator programming unit and one of the first component and the second component is a serial communication link.

121. (Previously Presented) A method as defined in claim 115, wherein said method further comprises:

- i) establishing a communication link with the second component for acquiring the second identifier from the second component;
- ii) establishing a communication link with the first component for transmitting the second identifier to the first component;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

iii) generating an address at the first component on the basis of the second identifier and the first identifier.

122. (Currently Amended) A computer readable storage medium including a program element suitable for execution by a computing apparatus for synchronizing addresses in a communication control system, the communication control system having a first component associated to a first identifier and a second component associated to a second identifier, the computing apparatus comprising:

- a) a memory unit;
- b) a processing unit for executing said program element, said processing unit in an operative relationship with said memory unit, when said program element is executed by said processing unit, said program element causing:
 - i) establishment of a communication link between the computing apparatus and the first component for acquiring the first identifier from the first component;
 - ii) storage of the first identifier in said memory unit;
 - iii) establishment of a communication link between the computing apparatus and the second component for transmitting the first identifier stored in said memory unit to the second component, the communication link between the computing apparatus and one of the first and second components being a wireless communication link;
 - iv) establishment of a communication link between the computing apparatus and the second component for acquiring the second identifier from the second component;
 - v) storage of the second identifier in said memory unit;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

vi) establishment of a communication link between the computing apparatus and the first component for transmitting the second identifier stored in said memory unit to the first component.

123. (Previously Presented) A computer readable storage medium as defined in claim 122, wherein the first component is a slave controller module for controlling a locomotive and the second component is a transmitter unit.

124. (Previously Presented) A computer readable storage medium as defined in claim 122, wherein the first component is a transmitter unit and the second component is a slave controller module for controlling a locomotive.

125-126. (Cancelled)

127. (Previously presented) A computer readable storage medium as defined in claim 122, wherein the wireless communication link is an infrared communication link.

128-129. (Cancelled)

130. (Currently Amended) A communication control system comprising:

- a) a first component having a memory storing a first identifier;
- b) a second component having a memory storing a second identifier, the second identifier being different from said first identifier;
- c) a device for synchronizing addresses between said first component and said second component, said device comprising:
 - i) a port for establishing a communication link with said first component and a communication link with said second component;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

- ii) a memory unit;
- iii) a processing unit operatively coupled to said port and said memory unit, said processing unit being suitable for:
 - (1) establishing a communication link through said port with said first component for acquiring the first identifier from the first component;
 - (2) storing the first identifier in said memory unit;
 - (3) establishing a communication link through said port with said second component for transmitting the first identifier stored in said memory unit to said second component, such as to allow said second component to hold the first identifier and the second identifier in a storage unit at said second component;
- d) said second component being operative for generating an address on the basis of the first identifier and the second identifier, wherein the communication link with one of said first component and said second component is a wireless communication link.

131. (Previously Presented) A control system as defined in claim 130, wherein said first component is a slave controller module for a locomotive and said second component is a transmitter unit.

132. (Previously Presented) A control system as defined in claim 130, wherein said first component is a transmitter unit and said second component is a slave controller module for a locomotive.

133. (Previously Presented) A control system as defined in claim 130, wherein said port has a first interface for communication with said first component and a second interface for communication with said second component.

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

134. (Cancelled)

135. (Previously Presented) A control system as defined in claim 133, wherein at least one of said first interface and said second interface is an infrared interface.

136. (Cancelled)

137. (Previously Presented) A control system as defined in claim 130, wherein said processing unit is further suitable for:

- i) establishing a communication link through said port with said second component for acquiring the second identifier from said second component;
- ii) storing the second identifier in said memory unit;
- iii) establishing a communication link through said port with said first component for transmitting the second identifier stored in said memory unit to said first component, such as to allow said first component to hold the first identifier and the second identifier in a storage unit at the first component.

138-144 (Cancelled)

145. (Currently Amended) A transmitter for remotely controlling a locomotive, said transmitter comprising:

- a) a data storage for holding an identifier of said transmitter;
- b) an interface in communication with said data storage, said interface being operative to establish a first communication link with an external entity for transmitting to the external entity data derived from the identifier of said transmitter via the first communication link, said first communication link being a wireless communication link;

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

- c) a signal transmitting unit in communication with said data storage, said signal transmitting unit being operative to transmit a modulated signal over a second communication link, the second communication link being ~~an~~ a wireless RF communication link, the modulated signal conveying:
 - i) at least one command for causing an action to be performed by the locomotive; and
 - ii) data derived from the identifier of said transmitter;
- d) said signal transmitting unit including a modulator releasing the modulated signal.

146. (Previously Presented) A transmitter as defined in claim 145, wherein said signal transmitting unit is operative to transmit the modulated signal to a slave controller mounted on board the locomotive, said data storage being operative to store an identifier of the slave controller.

147. (Previously Presented) A transmitter as defined in claim 146, wherein said transmitter further comprises a message builder in communication with said data storage, said message builder being operative to construct a message having a tag portion and a command portion, the tag portion conveying data derived from the identifier of the slave controller and data derived from the identifier of said transmitter, the command portion conveying the at least one command.

148. (Previously Presented) A transmitter as defined in claim 147, including a message encoder in communication with said message builder to encode the message constructed by said message builder.

149. (Previously Presented) A transmitter as defined in claim 148, wherein said signal transmitting unit is in communication with said message encoder for receiving the message

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

encoded by said message encoder and for producing the modulated signal conveying the at least one command on the basis of the message encoded by said message encoder.

150. (Previously Presented) A transmitter as defined in claim 148, wherein said message encoder processes the message constructed by said message builder to reduce an occurrence of consecutive 0's or 1's in the message constructed by said message builder.

151. (Previously Presented) A transmitter as defined in claim 149, wherein said modulator modulates the message encoded by said message encoder to produce the modulated signal conveying the at least one command.

152. (Previously Presented) A transmitter as defined in claim 145, wherein said interface is operative to receive over the first communication link the identifier of the slave controller for storage in said data storage.

153. (Previously Presented) A transmitter as defined in claim 145, wherein the first communication link is an IR communication link.

154. (Previously Presented) A transmitter as defined in claim 145, wherein the action to be performed by the locomotive is acceleration.

155. (Previously Presented) A transmitter as defined in claim 145, wherein the action to be performed by the locomotive is braking.

156-158 (Cancelled)

159. (Previously Presented) A transmitter as defined in claim 32, wherein the at least one command includes command information derived from the command portion of the message.

160. (Previously Presented) A transmitter as defined in claim 44, wherein the at least one command includes command information derived from the command portion of the message.

U.S. Patent Application Serial No. 09/281,464
Reply to Office Action dated September 30, 2005

161. (Previously Presented) A transmitter as defined in claim 30, wherein the first communication link is an IR communication link.

162. (Previously Presented) A transmitter as defined in claim 43, wherein the first communication link is an IR communication link.

163. (Previously Presented) A slave controller as defined in claim 53, wherein the first communication link is an IR communication link.

164. (Previously Presented) A combination as defined in claim 63, wherein the first communication link is an IR communication link.